Water Quality Actions

from Workshop # 6

(1) 11. Dilute pollutants in Delta inflows from San Joaquin River using ~~50,000 to 100,000 AF of~~ stored water. Improves Delta water quality by providing a source of manageable dilution flows that can be released during low-flow/high drainage discharge periods [Evaluate the feasibility of developing additional water supplies on the San Joaquin River for water quality dilution]

3. Manage drainage timing(i.e. restrict drainage discharges by 40 to 50 percent during periods of low Delta inflow) to reduce instream impacts to water quality. Reduces the concentration of pollutants entering the Delta and its tributaries during low flow periods and allows better coordination of discharges and dilution flows. Prioritize agricultural sites for drainage management, such as west-side of San Joaquin Valley, Panoche Creek area, etc.

14.Improves management of urban stormwater runoff to retain an additional 20 to 30 percent of runoff volume ~~contained presently~~. Improves Delta water quality by reducing the volume of urban stormwater runoff and concentration of pollutants entering Delta tributaries.

4. Construct wetlands to treat 10,000 to 15,000 AF of upstream wastewater effluent and Delta agriculture drainage. Improves Delta water quality by allowing some filtration and reduction in biological oxygen demand to result from constructed wetland treatment. Wetland treatment will be initiated as a "pilot program" to establish its feasibility and expanded appropriately.

5,15. Increase enforcement of source control regulations for agriculture drainage to moderately:

Reduce leachate concentrations and volumes.
Restrict spray programs adjacent to waterways.
Reduce runoff volumes.
Reduce the concentrations of pollutants in runoff.

Reduces in-Delta and tributary surface water concentrations of pesticides (herbicides, fumigants, fungicides), fertilizers, concentrated mineral salts, and microbial agents from agriculture drainage.

22 Coordinate incentives for developing efficient water management practices with *Water Supply Management* actions. Improves overall Delta tributary water quality by more efficient management and therefore reduce applications of water and chemicals. split for ag & urban

2. Establish incentives for retirement of agriculture lands with the most sever drainage problems and where cost effective. Reduces demand for Delta exports. Provides water quality benefits in the San Joaquin River and south Delta by retiring lands that contribute to drainage problems along the San Joaquin River

23 Establish incentives and other programs to encourage temporary land fallowing during drought

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periods to reduce dry year demand. Reduces demand for Delta exports. Provides water quality benefits in the San Joaquin River and south Delta by retiring lands that contribute to drainage problems along the San Joaquin River. Maximize the potential for temporary fallowing (such as rotational fallowing).

6. Coordinate fallowing or retirement of agriculture lands with severe, costly drainage problems with *Water Supply Management* actions. Retire lands that directly contribute to degraded water quality conditions in the Delta and its tributaries. In-Delta land retirement can reduce diversion effects, assist with actions to control subsidence, and improve water quality. Provides water quality benefits in the San Joaquin River and south Delta by retiring lands that contribute to drainage problems along the San Joaquin River.

34 Schedule deliveries in isolated conveyance facility and maximize drinking water quality to the end users. Improves export drinking water quality. Investigate scheduling of water in isolated facility to use high quality water stored south of the Delta as a blending supply during periods of low water quality in the Delta.

17. Implement moderate on-site mine drainage remediation measures developed in site specific studies at the Walker Mine, Malakoff Diggins, Leviathon Mine, Iron Mountain Mine and Penn Mine sites and control runoff from those and other high priority mine sites based on current water quality objectives for pollutants. Reduces future Delta and Sacramento River heavy metals loading. [Evaluate the potential to give urban areas flexibility to fund high priority mine remediation in-lieu of increasing expenditures on treatment plants improvements.]

7 13. Acquire about 100,000 AF of water from willing sellers in the San Joaquin Valley or develop from expanded surface water or groundwater storage. Transports fish through the San Joaquin River and Delta. Improves water quality. Improves management flexibility for diversions to reduce fish losses. San Joaquin environmental water can be used for pulse flows for fish transport or diluting poor water quality flows.

9. Treat and recycle agricultural drainage for irrigation purposes to reduce export demand where feasible while maintaining appropriate salt leaching requirements. Can improve Delta and San Joaquine River and export water quality depending on reclamation activity. Reclamation and reuse programs would focus on facilities that currently discharge treated wastewater tp to salt sinks or other degraded bodies of water which are not reusable.

8.Increase the level of agriculture water conservation to reduce demand. Use incentives or other means to achieve to achieve implementation of Efficient Water Management Practices (EWMP's) by more suppliers and water users. Expand the EWMP's to include additional practices. [May improve overall Delta and tributary water quality through retention of agricultural drainage water for release when pulse flows can provide dilution.] questionable likely to leave in

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16. Restore riverine channel features in the Sacramento River upstream of the Delta, including tributaries. Restore and enhance riparian vegetation on river upstream of the Delta between Verone and Colusa. Improves water quality and water supply reliability from Sacramento River and its tributaries.

25 Increase enforcement of source control regulations for urban and industrial runoff. Enforcement of real economic penalties can result in improved management practices that can improve tributary and Delta water quality. Prioritize sources and pollutants of concern and direct enforcement activities accordingly.

26 Coordinate with on-going or planned watershed management programs that promote and protect Delta water quality and fishery benefits. Improves Delta water quality and in-Delta and Anadromous fish habitats. Improves habitat quality and management practices in areas outside of CALFED's geographic scope, but within the area of influence for the Bay-Delta. Coordinate with other watershed management programs could include programs outside of CALFED's geographic scope.

10. Restore riverine channel features in the San Joaquin River upstream of the Delta, including the tributaries. Restore channel configurations of San Joaquin River to deepen channel, and improve water temperatures. Improves water quality and water supply from the San Joaquin River and its tributaries. Improves (reduces) water temperatures. Feasible and most cost-effective habitat restoration and channel modifications.

27 Construct new or expanded existing upstream storage. Provides additional storage and operational flexibility for supply, quality, and environmental needs.

28 Construct new or expanded existing downstream storage. Provides additional storage and operational flexibility for supply, quality, and environmental needs.

12. Develop improvements on Old River at the head of Old River to block fish movement into barrier old River, and manage water flows and stages down Old River. Improves water quality in south Delta. salinity, stage & fish

21. Implement a comprehensive Delta Long-Term Protection Plan. Reduces vulnerability of Delta water quality to salinity intrusion. → Preserve levees - maintenance

7. Treat 20 to 30 percent of agriculture drainage to remove pollutants, to either be reused or used as part of a localized drainage management practice in coordination with the management of drainage timing, to reduce impacts to water quality. Provides additional dilution flows for improving the quality of receiving waters in-Delta and to Delta tributaries.

29 Provide incentives for filtration system upgrades or watershed protection program development to improve source drinking water quality to meet EPA Drinking Water Quality Standards. Prioritize targeted recipients using criteria that includes, but is not limited to, number of service connections

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and upgrade costs needed to meet Maximum Contaminant Goals.

30 Provide incentives for phased conversion of municipal treatment facilities from processes resulting in high disinfection byproduct precursor discharges to processes that do not produce DBP's. Reduces concentration of compounds contributing to trihalomethane formation potential and degradation.

31 C. Expand and extend existing programs to provide incentives for pollution source control on agriculture lands. Improves in-stream water quality

32 C. Encourage management of riparian zones to protect water quality by funding a cooperative program in watersheds of reservoirs operated by participating water districts. Preserves riparian and aquatic habitats, reduces sedimentation, improves Delta water quality.

33 C. Encourage management of land uses to protect water quality by improving land use practices in watersheds of reservoirs operated by participating water districts. Preserves terrestrial and aquatic habitats, reduces sedimentation, improves Delta water quality.

34. Research

35. Discharges from boats (sanitary)

36. ~~Watershed planning~~
Urban runoff control in new developments

37. Sediment toxicity

38. Unknown toxicities

39. Reservoir reop incentives on all trib's

40. Study & implement actions to reduce ~~salinity~~ effects of salinity in San Joaquin River, to maintain water levels & circulation in S. Delta &
to reduce recycled salt load in S. J Valley

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